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## **SHORT RESUME**

### **EDUCATION**

University of Nevada Reno, NV, Ph.D. 2009  
Humboldt State University, Humboldt, CA: *M.S.*, Environmental Systems (Geology), 1997  
University of California, Santa Cruz, CA: *B.A.*, Earth Science, 1992

### **PROFESSIONAL EXPERIENCE**

University of Nevada, Reno, Mackay School of Earth Sciences and Engineering, and Nevada Bureau of Mines and Geology, Assistant Professor, 2015-2020, Associate Professor, Dec. 2020-date  
Koehler Geohazards, LLC, Founder and Principal Geologist, 2015-date  
State of Alaska, Dept. of Geological and Geophysical Surveys, Earthquake Geologist 2009-2015  
Center for Neotectonic Studies, University of Nevada, Reno, Research Assistant, 2004-2009  
William Lettis & Associates, Inc., Walnut Creek, CA, Project Geologist, 1999-2004  
US Geological Survey, project paleoseismologist, 10 trenches, Puget Sound, Wa, 1998-2003  
Humboldt State University, Humboldt, CA, Research Assistant, 1994-1997

### **AWARDS**

Top Student Presenter, Seismological Society of America, annual meeting, 2009  
Outstanding Student Paper Award, American Geophysical Union, Geodesy Section, 2008.  
Student poster competition winner, Geological Society of Nevada, 2007.  
Jonathan O. Davis Scholarship, Desert Research Institute (DRI), 2006.  
Geological Society of America (GSA), student research grant, 2005.  
Outstanding student research award, Geological Society of America, Structural Geology and Tectonics Division, 2005.

### **APPOINTMENTS**

Western States Seismic Policy Council (WSSPC), Chair, Basin and Range Committee (2016-2020)  
Western States Seismic Policy Council (WSSPC), Nevada Representative (2015-date)  
Nevada Earthquake Safety Council (NESC) participant (2015-2016, proxy for NBMG director 2017)  
Member, Geotechnical Extreme Events Reconnaissance (GEER) (2015-date)  
Member, Alaska Tsunami Mapping Team, National Tsunami Hazard Mitigation Program (2010-2015)  
Western States Seismic Policy Council (WSSPC), Alaska representative (2013-2015)  
Western States Seismic Policy Council Tsunami Hazards Mitigation Committee (2013-2016)  
Alaska Seismic Hazards Safety Commission (2010-2015), Commission member and vice-chair.

### **AFFILIATIONS AND REGISTRATION**

California Professional Geologist, # 7615  
Geological Society of America  
American Geophysical Union

Seismological Society of America  
Friends of the Pleistocene

### **POST EARTHQUAKE INVESTIGATIONS**

May 15 to 22, Field coordinator, surface rupture team, M6.5 Monte Cristo Mountains earthquake, Nevada. Collaboration with USGS and CGS.

July 4 to 9, 2019 and September 10-12, 2019, Rapid reconnaissance of the 4 July Mw6.4 and 5 July Mw7.1 Ridgecrest earthquakes, southern California. Collaboration with USGS, CGS, and GEER.

November 30, 2018, Co-team leader, Rapid reconnaissance of the 30 Nov. 2018, M7.0 Anchorage Alaska earthquake, Geotechnical Extreme Events Reconnaissance (GEER). Team leader phase 2 investigation 4/26-5/1/2019.

January 2010, NSF rapid response team: Documented geologic effects of the January 12, 2010 M7 earthquake on the Enriquillo fault, Port-au-Prince, Haiti, Supported by NSF.

February 2008, Immediate scientific response team to the M6 Wells Nevada earthquake, Supported by the Nevada Bureau of Mines and Geology, Utah Geological Survey, and U. Nevada.

June 2000, Reconnaissance investigation of surface rupture associated with the 1999 Chi-Chi, Taiwan earthquake along the Chelungpu fault, supported by Pacific Gas & Electric co. and NEHRP.

June 1992, Reconnaissance surveys of surface rupture associated with the 1992 M7.3 Landers, California earthquake, with University of California, Santa Cruz.

### **SELECT PUBLICATIONS**

\*Indicates student working under my advisement

**Koehler, R.D.**, S. Dee, A. Elliott, A. Hatem, A. Pickering, I. Pierce, G. Seitz, 2021, Field response and surface rupture characteristics of the 2020 M6.5 Monte Cristo Mountains earthquake, central Walker Lane, Nevada: *Seismological Research Letters*, v. 92, 823-839.

\*De Masi, C., **Koehler, R.D.**, Dee, S., Keen-Zebert, A., 2021, Early development of strike-slip faulting: Paleoseismic study along the Petersen Mountain fault, northern Walker Lane, Nevada, *Journal of Quaternary Science*, v. 36, no. 3, p. 403-414.

\*Chupik, C., **Koehler, R.D.**, and Keen-Zebert, A., 2021, Quaternary mapping, and paleoseismic investigation of the Warm Springs Valley fault, northern Walker Lane, Nevada- northern California, *Bulletin of the Seismological Society of America* (accepted June 9, 2021).

Cabas, A., Beyzaei, C., Stuedlein, A., Franke, K.W., **Koehler, R.D.**, Zimmaro, P., Wood, C., Christie, S., Yang, Z., and Lorenzo-Velazquez, C., 2021, Geotechnical lessons learned from the M7.1 2018 Anchorage Alaska earthquake, *Earthquake Spectra*.

Hatem, A.E., Collett, C.M., Gold, R.D., Briggs, R.W., Angster, S.A., Field, E.H., Anderson, M., Ben-Horin, J.Y., Dawson, T., DeLong, S., DuRoss, C., Thompson Jobe, J., Kleber, E., Knudsen, K.L., **Koehler, R.**, Koning, D., Lifton, Z., Madin, I., Mauch, J., Morgan, M., Pearthree, P., Petersen, M., Pollitz, F., Scharer, K., Powers, P., Sherrod, B., Stickney, M., Wittke, S., and Zachariasen, J., 2021, Earthquake geology inputs for the National Seismic Hazard Model (NSHM) 2023, version 1.0: U.S. Geological Survey data release, <https://doi.org/10.5066/P918XCUU>.

- Reger, R.D., Hubbard, T.D., and **Koehler, R.D.**, 2021, Surficial geology and geohazards in the Alaska Highway Corridor, Alaska: Alaska Division of Geological & Geophysical Surveys, Professional Report 124, 149 p., 18 sheets, scale 1:63,360.
- Dee, S., **Koehler, R.D.**, Elliott, A.J., Hatem, A.E., Pickering, A.J., Pierce, I., Seitz, G.G., Collett, C.M., Dawson, T.E., De Masi, C., dePolo, C.M., Hartshorn, E.J., Madugo, C.M., Trexler, C.C., Verdugo, D.M., Wesnousky, S.G., and Zachariasen, J., 2021, Surface rupture map of the 2020 M6.5 Monte Cristo Range earthquake, Esmeralda and Mineral counties, Nevada: Nevada Bureau of Mines and Geology Map 190, 2 sheets, scale 1:14,000, 26 p.
- Faulds, J.E., **Koehler, R.D.**, and Henry, C.D., 2021, Preliminary geologic map of the south half of the Verdi quadrangle, Washoe County, Nevada: Nevada Bureau of Mines and Geology Open-File Report 21-3, scale 1:24,000, 4 p.
- Duross, C., and 47 others, 2020, Ridgecrest displacement observations for use in constructing along-strike displacement distributions for the M6.4 and M7.1 ruptures, Bulletin of the Seismological Society of America, v. 110, no. 4, p. 1400-1418.
- Hammond, W.C., Blewitt, G., Kreemer, C., **Koehler, R.D.**, and Dee, S., 2020, Geodetic observation of seismic cycles before, during, and after the 2020 Monte Cristo Range earthquake using the MAGNET GPS network, Seismological Research Letters, v. 92, 647-662.
- Koehler, R.D.**, 2020, Assessment of potentially active faults in the northwestern Livengood quadrangle, Alaska, State of Alaska, Division of Geological & Geophysical Surveys, Report of Investigation, 2020-4, 35 p.
- Koehler, R.D.**, Reger, R.D., Spangler, E.R., and Hubbard, T.D., 2019, Assessment of geomorphology and geologic hazards in the Parks Highway-Minto Flats-Dalton Highway infrastructure corridor: Cook Inlet to Prudhoe Bay, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2019-8, 82 p., 4 sheets.
- Carlson, C.W., **Koehler, R.D.**, and Henry, C.D., 2019, Preliminary geologic map of the Washoe City quadrangle, Washoe County Nevada: Nevada Bureau of Mines and Geology Open-File Report 19-4, scale 1:24,000, 7 p.
- Pierce, I.\*, Williams, A., **Koehler, R.D.**, and Chupik, C., 2020, High resolution structure-from-motion models and orthophotos of the southern sections of the 2019 Mw7.1 and Mw6.4 Ridgecrest, earthquakes surface ruptures, Seismological Research Letters, 91, 4, 2124-2126.
- Ponti, D.J., Blair, J.L., Rosa, C.M., Thomas, K., Pickering, A.J., Akciz, S., Angster, S., Avouac, J.P., Bachhuber, J., Bacon, S. et al., 2020, Documentation of surface fault rupture and ground deformation features produced by the Ridgecrest M6.4 and M7.1 earthquake sequence of July 4 and 5, 2019, Seismological Research Letters, XX, 2942-2959.
- Koehler, R.D.**, Franke, K.W. (Eds.), Beyzaei, C.Z., Cabas, A., Christie, S., Dickenson, S., Pierce, I., Stuedlein, A., and Yang, Z., 2019, Geotechnical engineering reconnaissance of the 30 November 2018 Mw7.1 Anchorage, Alaska earthquake, Version 2.0, Geotechnical Extreme Events Association (GEER), report number GEER-059b.
- Wong, I., Thomas, P., **Koehler, R.D.**, and Lewandowski, N., 2019, Assessing the seismic hazards in Jamaica incorporating geodetic and Quaternary fault data, Bulletin of the Seismological Society of America, Vol. 109, No. 2, pp. 716-731.
- Nicolisky, D.J., Suleimani, E.N., **Koehler, R.D.**, and Salisbury, J.B., 2019, Developing an approximate tsunami hazard zone for areas with poor topographic coverage in Alaska, Pure and Applied Geophysics, v. 176, pp. 3185-3205.
- Anderson, J.G., **Koehler, R.D.**, and 22 others, 2019, A seismic hazards overview of the urban regions of Nevada: Recent advancements and research directions, Seismological Research Letters, v. 90, no 4, pp. 1577-1583.

- Koehler, R.D.**, and Anderson, J.G., 2019, 2018 Working Group on Nevada Seismic Hazards – Summary and recommendations of the workshop, Nevada Bureau of Mines and Geology Open-File Report 19-2, 44 p.
- Franke, K., and **Koehler, R.D.** (Eds.), Beyzaei, C.Z., Cabas, A., Pierce, I., Stuedlein, A., and Yang, Z., 2018, Geotechnical engineering reconnaissance of the 30 November 2018 M7.0 Anchorage, Alaska earthquake, Version 1.0, Geotechnical Extreme Events Association (GEER), report number GEER-059, doi:10.18118/G6P07F
- Koehler, R.D.**, 2019, Active faulting in the North Valleys region of Reno, Nevada: A distributed zone within the northern Walker Lane, *Geomorphology*, v. 326, p. 38-53.
- Koehler, R.D.**, and Carver, G.A., 2018, Active faults and Seismic Hazards in Alaska, Alaska Division of Geological & Geophysical Surveys, Miscellaneous Publication MP 160, 59 p.
- Witter, R.C., Briggs, R., Engelhart, S.E., Gelfenbaum, G., **Koehler, R.D.**, Nelson, A., LaSelle, S., Corbett, R., and Wallace, K., 2018, Evidence for frequent large tsunamis spanning locked and creeping parts of the Aleutian megathrust, *Geological Society of America Bulletin*, v. 131, no. 5/6, p. 707-729.
- Koehler, R.D.**, 2017, Castle Mountain fault, southcentral Alaska: Observations on slip partitioning from lidar and paleoseismic trenching, pp. 206-209, *In*: Clark, K.J., Upton, P., Langridge, R., Kelly, K., Hammond, K., 2017, Proceedings of the 8<sup>th</sup> International INQUA Meeting on Paleoseismology, Active Tectonics, and Archeoseismology, Handbook and Programme, 13-16 November, 2017, Lower Hutt (NZ): GNS Science Miscellaneous Series 110, 441 p.
- Koehler, R.D.**, Reger, R.D., and Spangler, E., and Gould, A.I., 2016, Investigation of potentially active tectonic faults along the route of the proposed ASAP pipeline, Livengood To Anchorage, Alaska, State of Alaska, Division of Geological & Geophysical Surveys, Report of Investigation 2015-4, 71 p.
- Nicolosky, D.J., Freymueller, J.T., Witter, R.C., Suleimani, E.N., **Koehler, R.D.**, 2016, Evidence for shallow megathrust slip across the Unalaska seismic gap during the great 1957 Andreanof Island earthquake, central Aleutian Islands, Alaska, *Geophysical Research Letters*, v. 43, no. 19, 10,328-10,337.
- Witter, R.C., Carver, G.A., Briggs, R., Gelfenbaum, G., **Koehler, R.D.**, La Selle, S.P., Bender, A., Engelhart, S.E., and Hemphill-Haley, E., 2015, Unusually large tsunamis frequent a currently creeping part of the Aleutian megathrust, *Geophysical Research Letters*, v. 43, Issue 1, p. 76-84.
- Reger, R.D., Stevens, D.S.P., and **Koehler, R.D.**, 2015, Surficial geology of the Tyonek area, south-central Tyonek Quadrangle, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigations 2015-7, 38 p. 1 sheet, scale 1:63,360.
- Christophersen, A., Litchfield, N., Berryman, K., Thomas, R., Pagani, M., Henshaw, P., wyss, B., Wallace, L., Ries, W., Hayes, G., Haller, K., Toshikazu, Y., **Koehler, R.D.**, Clark, D., Wolfson-Schwehr, M., Boettcher, M., Villamor, P., Horspool, N., Ornthammarath, T., Zuniga, r., Langridge, R., Stirlig, M., Goded, T., Basili, R., Stein, R., Costa, C., Yeats, R., 2015, Development of the Global Earthquake Model's neotectonic fault database, *Natural Hazards*, v. 79, p. 111-135.
- Witter, R.C., Briggs, R.W., Engelhart, S.E., Gelfenbaum, G., **Koehler, R.D.**, and Barnhart, W., 2014, Little late Holocene strain accumulation and release on the Aleutian megathrust below the Shumagin Islands, Alaska, *Geophysical Research Letters*, v. 41, p. 2359-2367.
- Koehler, R.D.**, Reger, R.D., Sicard, K., and Spangler, E., 2013, Yukon River bridge landslide: geologic and Geotechnical Evaluation, Alaska Division of Geological & Geophysical Surveys, Preliminary Interpretive Report, PIR 2013-6.
- Koehler, R.D.**, and Farrell Woods, R-E, 2013, Paleoseismic and lidar investigations along the Cathedral Rapids and Dot "T" Johnson faults, Interior Alaska: Report of Investigations 2013-4, Alaska, Division of Geological & Geophysical Surveys.
- Koehler, R.D.**, Mann, P., Prentice, C.S., Grandison-Wiggins, M., Bedford, B., and Brown, L., 2013, The Enriquillo-Plantain Garden fault in Jamaica: paleoseismology and seismic hazard, *Bulletin of the Seismological Society of America*, v. 103, issue 2a, p. 971-983.

- Koehler, R.D.**, and Carver, G.A., 2012, Active and potentially active faults along the Alaska Highway corridor, Tetlin Junction to the Canada border, Alaska Division of Geological & Geophysical Surveys, Preliminary Interpretive Report, PIR 2012-2.
- Koehler, R.D.**, Farrell, R-E, Burns, P., and Combellick, R., 2012, Quaternary faults and folds of Alaska: A digital database, Miscellaneous Publication MP 141, Alaska Division of Geological and Geophysical surveys.
- Bemis, S., Carver, G.A., and **Koehler, R.D.**, 2012, The Quaternary thrust system of the Northern Alaska Range, *Geosphere*, v. 8, no. 1, p. 1-10.
- Koehler, R.D.**, and Reger, R.D., 2011, Reconnaissance evaluation of the Lake Clark fault, Tyonek area, Alaska, Preliminary Interpretive Report 2011-1, Alaska Division of Geological and Geophysical Surveys.
- Koehler, R.D.**, and Mann, P., 2011, Field observations from the 12 January 2010 Haiti earthquake: Implications for seismic hazards and future post-earthquake reconnaissance investigations in Alaska, Report of Investigations 2011-2, Alaska Division of Geological & Geophysical Surveys.
- Koehler, R.D.**, Personius, S.F., Haeussler, P.J., Schwarz, D., and Seitz, G., 2011, A paleoseismic study along the central Denali fault, Chistochina Glacier area, south-central Alaska, Report of Investigation 2011-1, Alaska Division of Geological and Geophysical Surveys.
- Prentice, C., Mann, P., Crone, A.J., Gold, R.D., Hudnut, K.W., Briggs, R.W., **Koehler, R.D.**, Jean, P., 2010, Seismic hazard of the Enriquillo-Plantain Garden fault in Haiti inferred from paleoseismology, *Nature Geoscience*, v. 3, p. 789-793.
- Geo-Engineering Extreme Events Reconnaissance (GEER), 2010, Contributing Authors: Rathje, E., Bachhuber, J., Cox, B., French, J., Green, R., Olson, S., Rix, G., Wells, D., Suncar, O., Harp, E., Mann, P., and **Koehler, R.**, Geotechnical Engineering Reconnaissance of the 2010 Haiti Earthquake, version 1, Report of the National Science Foundation-Sponsored GEER team.
- Koehler, R.D.**, and Wesnousky, S.G., 2011, Late Pleistocene regional extension rate derived from earthquake geology of late Quaternary faults across Great Basin, Nevada between 38.5° and 40° N latitude, *Geological Society of America Bulletin*, v. 123, no. 3-4, p. 631-650.
- Turner, R., **Koehler, R.D.**, Briggs, R.W., and Wesnousky, S.G., 2008, Paleoseismic and slip rate observations along the Honey Lake Fault, northeastern California, *Bulletin of the Seismological Society of America*, Vol. 98, No. 4.
- Kelson, K.I., A.R. Streig, **R.D. Koehler**, and Keng-Hao Kang, 2006, Timing of Late Holocene Paleearthquakes on the Northern San Andreas Fault at the Fort Ross Orchard Site, Sonoma County, California, *Bulletin of the Seismological Society of America*, 96, p. 1012-1028.
- Witter, R.C., Knudsen, K.L., Sowers, J.M., Wentworth, C.M., **Koehler, R.D.**, and Randolph C.E. with digital database by Wentworth, C.M, Brooks, S.K., and Gans, K.D., 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California, U.S. Geological Survey, Open-File Report 2006-1037, Version 1.1.
- Johnson, S.Y., A.R. Nelson, S.F. Personius, R.E. Wells, H.M. Kelsey, B.L. Sherrod, K. Okumura, **R. Koehler, III**, R. Witter, L. Bradley, and D.J. Harding, 2004, Evidence for late Holocene earthquakes on the Utsalady Point fault, northern Puget Lowland, Washington, *Bulletin of the Seismological Society of America*, V. 94, No. 6.
- Nelson, A.R., Johnson S.Y., Kelsey, H.M., Wells, R.E., Sherrod, B.L., Pezzopane, S.K., Bradley, L.A., **Koehler, R.D.**, and Bucknam, R.C., 2003, Late Holocene Earthquakes on the Toe Jam Hill Fault, Seattle Fault Zone, Bainbridge Island, Washington, *Geological Society of America Bulletin*, v. 115, no. 11, p. 1388-1403.
- Nelson, A.R., Johnson, S.Y., Wells, R.E., Pezzopane, SK., Kelsey, H.M., Sherrod, B.L., Bradley, L.A., **Koehler, R.D.**, III, Bucknam, R.C., Haugerud, R.A., and LaPrade, W.T., 2002, Field and Laboratory data from an earthquake history study of the Toe Jam Hill fault, Bainbridge Island, Washington: U.S. Geological Survey Open-File Report 02-0060.